

Factoring with Algebra Tiles

Factor the following expressions (be sure to use algebra tiles for a few).

a) $2x^2 + 3x + 1$

b) $6x^2 - 5x - 4$

c) $6x^2 + 7x + 2$

d) $3x^2 + 7x + 2$

e) $2x^2 + 3x - 14$

f) $2x^2 + 7x + 6$

g) $x^2 + 3x + 2$

h) $x^2 + 4x - 12$

i) $x^2 + 4x + 3$

j) $x^2 - 3x - 10$

k) $x^2 + 7x + 12$

l) $x^2 - 7x - 8$

m) $x^2 + 8x + 16$

n) $x^2 - 4x + 4$

o) $9x^2 + 12x + 4$

p) $x^2 - 16$

q) $4x^2 - 25$

r) $49x^2 - 81$

s) What is in common with examples a-f? _____

t) What is in common with examples g-l? _____

u) What is in common with examples m - o? _____

v) What is in common with examples p - r? _____

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Answers

- a) $(2x + 1)(x + 1)$ b) $(2x + 1)(3x - 4)$ c) $(3x + 2)(2x + 1)$
d) $(x + 1)(3x + 1)$ e) $(2x + 7)(x - 2)$ f) $(2x + 3)(x + 2)$
g) $(x + 2)(x + 1)$ h) $(x + 6)(x - 2)$ i) $(x + 1)(x + 3)$
j) $(x - 5)(x + 2)$ k) $(x + 3)(x + 4)$ l) $(x - 8)(x + 1)$
m) $(x + 4)^2$ n) $(x - 2)^2$ o) $(3x + 2)^2$
p) $(x + 4)(x - 4)$ q) $(2x + 5)(2x - 5)$ a) $(7x + 9)(7x - 9)$
s) coef of x^2 is greater than 1
t) coef of x^2 is 1
u) perfect squares
v) difference of squares